



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/529,455	05/26/2005	Guoshun Deng	CU-4125 RJS	7957

26530 7590 04/24/2008
LADAS & PARRY LLP
224 SOUTH MICHIGAN AVENUE
SUITE 1600
CHICAGO, IL 60604

EXAMINER

THAI, TUAN V

ART UNIT	PAPER NUMBER
----------	--------------

2186

MAIL DATE	DELIVERY MODE
-----------	---------------

04/24/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/529,455

Applicant(s)

DENG ET AL.

Examiner

Tuan V. Thai

Art Unit

2186

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 September 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Art Unit: 2186

Part III DETAILED ACTION

Response to Amendment

1. This office action is in response to Applicant's communication filed September 27, 2007. This amendment has been entered and carefully considered. Claims 1-19 remain pending in the application. Claims 1-19 are rejected. The objection of claims 12, 13 and 15 is hereby withdrawn. The rejection of claims 2, 17-19 under 35 USC 112 second paragraph is also withdrawn due to amendment filed September 27, 2007.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Art Unit: 2186

3. Claim 1 is rejected under 35 U.S.C. § 102(e) as being anticipated by Tullis (US 6535243).

Regarding Claim 1, the claim recites "A data exchange and storage device, comprising." a controller module including a firmware used for controlling the operation of each of modules in the data exchange and storage device and performing data processing and information exchange;". Tullis teaches a hand-held digital camera (i.e. data exchange and storage device) that is able to wirelessly transfer data with a host computer. Fig. 2 shows the camera to have a processor (i.e. controller module) that is used for controlling the memory and transceiver (i.e. for controlling the operation of each of modules in the data exchange and storage device) and perform data processing (Col. 4, Line 25) and information exchange (Col. 4, Lines 22-25). Since the processor, which is hardware, is able to perform processing on raw digital image data (Col. 4, Line 25), it is then applying predetermined steps to an image, and qualifies as firmware. Claim 1 further recites "an internal memory module for storing data under the control of the controller module". Tullis teaches the digital camera to have built-in memory (Col. 4, Line 42), which qualifies as an internal memory module for storing data

Art Unit: 2186

under control of the processor (i.e. controller module).

Claim 1 further recites "a system interface module capable of being connected with a data processing system and performing data exchange with the data processing system under the control of the controller module; and". Fig. 2 teaches a transceiver (i.e. system interface) with a transmitter and receiver, the transceiver being wirelessly connected (Col. 5, Line 23) to a host computer (i.e. data processing system) (Col. 5, Line 43). The transceiver transfers data to and from the host computer (i.e. performs data exchange with the data processing system) (Col. 5, Line 60). Claim 1 further recites "an external storage equipment interface module being connected with an external storage equipment and performing data exchange with the external storage equipment under the control of the controller module." Tullis further teaches that removable memory (i.e. external storage equipment) can augment built-in memory (Col. 4, Line 43). Col. 1, Line 40 teaches that removable memory can include detachable memory cards, as taught by Sawanobori (US 6535243), whom Tullis incorporates by reference. Fig. 1 of Sawanobori teaches an interface (Interface CCT) that connects the memory card (i.e. external storage equipment) to the digital camera. The

Art Unit: 2186

interface allows data to be exchanged from the camera to the memory card (Col. 3, Line 40 of Sawanobori). Then Tullis teaches, through an incorporated reference, an interface that qualifies as an external storage equipment interface module. Since the processor of Fig. 1 is able to write to the host computer (i.e. data processing system) and removable memory (i.e. external storage equipment), both are under at least partial control of the processor (i.e. controller module). The further limitation of "wherein the controller module permits data exchange and data access from the internal memory module to the external storage equipment and from the external storage equipment to the internal memory module when the data processing system is not connected" is taught by Tullis since Tullis clearly disclose that the digital camera can communicate with the host computer through the wireless communication link (e.g. see abstract, column 2, lines 45 et seq.).

Regarding Claim 13, the claim recites "further comprising an audio module and/or a video module for combining with the internal memory module or external storage equipments to implement a function of playing multi-media." Tullis teaches the digital camera to allow for a voice recording to annotate images (Col. 8, Line 10)

Art Unit: 2186

where a microphone and speaker makes up an audio module for recording and outputting the voice data (i.e. implement a function of playing multi-media). Further note that the function of playing multi-media constitutes intended use.

4. Claims 1, 4-8, 10-12, and 15-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Battaglia (US 6658202).

Regarding Claim 1, the claim recites "A data exchange and storage device, comprising." a controller module including a firmware used for controlling the operation of each of modules in the data exchange and storage device and performing data processing and information exchange;" Battaglia teaches a portable data transfer and mass storage device (Fig. 1) (i.e. data exchange and storage device) for transferring data from a flash memory (i.e. external storage equipment) to a mass storage device (i.e. internal memory module). The apparatus of Fig. 1 transfers data from the flash card of a digital camera to a mass storage device in the apparatus, freeing the memory on the flash card. The data on the mass storage device can then be downloaded to a computer. Fig. 2 teaches a system controller logic and a processor that together qualify as a controller module. The

Art Unit: 2186

processor has associated firmware (Col. 6, Line 1), and performs data processing (Col. 5, Line 15). The system controller logic controls the operations of the interfaces and internal memory (i.e. modules) (Fig. 2) and performs information exchange (Col. 3, Line 45 and Col. 2, Line 25). Claim 1 further recites "an internal memory module for storing data under the control of the controller module;" Battaglia teaches a mass storage device (i.e. internal memory module)(Fig. 1) for storing data under the control of the system controller logic (i.e. controller module) (Fig. 2). Claim 1 further recites "a system interface module capable of being connected with a data processing system and performing data exchange with the data processing system under the control of the controller module; and". Fig. 1 teaches serial/parallel ports (i.e. hardware system interface module), which Fig. 2 shows to include a USB interface, FireWire Interface, or Parallel Port Interface (i.e. software system interface module). The interfaces are connected to a computer (i.e. data processing system) (Col. 5, Line 34) and performs downloading and uploading of data (i.e. data exchange) (i.e. Col. 7, Line 25) with the computer. Since the computer receives data through the system controller logic,

Art Unit: 2186

it is under at least partial control of the system controller logic (i.e. controller module). The further limitation of "wherein the controller module permits data exchange and data access from the internal memory module to the external storage equipment and from the external storage equipment to the internal memory module when the data processing system is not connected" is taught by Battaglia since Battaglia disclose that the data can be transferred/download thru a wide range of ports including firewire (including wireless) as being disclosed (e.g. see column 3, lines 46 et seq.).

Claim 1 further recites "an external storage equipment interface module being connected with an external storage equipment and performing data exchange with the external storage equipment under the control of the controller module." Fig. 1 teaches a first flash memory input port and a second memory input port (i.e. external storage equipment interface module) for performing data exchange with a memory module removed from a digital camera (i.e. external storage equipment). Since the memory module transfers data through the system controller logic, it is under at least partial control of the system controller logic (i.e. controller module). Fig. 2 further teaches the

Art Unit: 2186

second memory input port can have a PCMCIA interface (Col. 4, Line 17).

Regarding Claim 4, the claim recites "wherein the system interface module includes USB interface, IEEE 1394 interface, Bluetooth interface, IrDA infrared interface, HomeRF interface, IEEE802.11a interface, IEEE802.11b, IEEE802.11g, SCSI, RS232 and printer parallel port, wired wide area local area interface and/or wireless wide area local area interface." Battaglia teaches the serial/parallel port (i.e. system interface) that connects the storage device of Fig. 1 to a computer system includes a USB and FireWire (i.e. IEEE 1394) interface (Col. 3, Line 47).

Regarding Claim 5, the claim recites "wherein the external storage equipment interface module (64) includes SM,, CF, MMC, SD, MS, MD or x-D interface". Battaglia teaches the flash memory of the digital cameras (i.e. external storage equipment) to include SmartMedia, Compact Flash, MMC media, or Sony memory Stick (Col. 4, Line 5 and Col. 2, Line 53). Then the flash memory input port of Fig. 1 qualifies as an external storage equipment interface module including one of the interfaces above.

Regarding Claim 6, the claim recites "wherein the system interface module and the external storage equipment

Art Unit: 2186

interface module either includes single interface or a group of interfaces of the same type or different type of interfaces ". Battaglia teaches the interface to the computer system (i.e. system interface) to include a USB, FireWire, and Parallel Port Interface (i.e. group of interfaces), that are either the same or different.

Regarding Claim 7, the claim recites "a power source module for supplying power to the data exchange and storage device from the data processing system through an external power source or a self-supplied battery or the system interface module ". Battaglia teaches a power supply in Fig. 2.

Regarding Claim 8, the claim recites "a manual control module for performing the manual control of data capture and transmission, information prompt, and operational mode switching." Fig. 2 teaches keyboards and buttons (i.e. manual control module) to allow a user to manually initiate download of information onto the mass storage device (Col. 2, Line 66). The keys create a user interface to allow a user to select between downloading data or reformatting the flash memory, the two operations being two operational modes. Col. 3, Line 17 further teaches a LCD display that qualifies as an information prompt, since it allows a user

Art Unit: 2186

to preview an image before deleting or keeping it. That is, the LCD prompts the user with an image and lets the user decide whether or not to save the image.

Regarding Claim 10, the claim recites "an information prompt module for displaying static information and dynamic information". Battaglia teaches a LED and LCD display (i.e. information prompt module) that allows the user to decide (i.e. prompts the user) whether to save the image (Col. 3, Line 17). The LED and LCD further display information to the user, with dynamic information such as copy completion status, download-in-progress status (Col. 3, Line 32), or data integrity status and standard-conforming status (Col. 6, Lines 25-30).

Regarding Claim 11, the claim recites "wherein the information includes user information, product information, device information, transmission file information, operational state information and the information of external storage equipments which are connected therewith." Battaglia teaches transmission file information and operational state information (Col. 6, Line 18 and Col. 3, Line 26), information of external storage equipments (Col. 6, Line 24) through the LED and LCD display. Information showing the integrity of a flash module (Col. 6, Line 30)

Art Unit: 2186

qualifies as device and product information. The LCD and LED would further be able to display user information, as the exact kind of information displayed does not affect the structure of the LCD or LED or information prompt module, and constitutes intended use.

Regarding Claim 12, the claim recites "the information prompt module includes at least one of a liquid crystal display, a light emitting diode, a LED, a sound device and a vibrator." Battaglia teaches a LED and LCD display (Col. 3, Line 25).

Regarding Claim 15, the claim recites "wherein the external storage equipment is a removable disk or a storage card." Battaglia teaches the external storage equipment to be a flash card that is removable (Col. 2, Line 59).

Regarding Claim 16, the claim recites "1) the controller module of the data exchange and storage device detecting the characteristic information of the external storage equipments connected with the relevant interfaces of the external storage equipment interface module, selecting the relevant interface protocols according to the characteristics information of the external storage equipments, and establishing connections with the external storage equipments;" Battaglia teaches detecting the data

Art Unit: 2186

integrity of a memory module whose data is to be downloaded to the mass storage device (Col. 6, Line 21). Col. 6, Line 25 further teaches checking whether the memory module conforms to a standard format supported by the device. The integrity and the format of the data on the module qualify as characteristic information of the external storage equipment connected with the relevant interfaces of the external storage equipment interface module. Since the firmware checks for the appropriate standard format (i.e. interface), it is inherent that the relevant transfer format (i.e. interface protocol) according to the format of the memory module is selected. 2) the controller module controlling the data exchange between the data exchange and storage device and the external storage equipment or the data processing system, and controlling the access to the internal memory module and the external storage equipment according to the requests from the data processing system or users..." Battaglia teaches in Fig. 2 for the system controller logic (i.e. controller module) to control data exchange between the portable data transfer and mass storage device (title of Battaglia's invention) and a flash memory module (i.e. external storage equipment), where it controls access to the mass storage device (i.e. internal

Art Unit: 2186

memory module) and flash memory cards according to requests from users (Col. 4, Line 65) or computer system (Col. 6, Line 13).

Regarding Claim 17, the claim recites "the controller module displaying the data read from the external storage equipment or the internal memory module on the display part of the information prompt module according to the operational instructions of the data processing system and the users; and/or outputting the user information, the operational state information of the data exchange and storage device, the relevant information of the external storage equipment through the information prompt module". Battaglia teaches displaying the image (i.e. data) read from the flash cards (i.e. external storage equipment) on the LCD display (i.e. display part of the information prompt module) (Col. 3, Line 18) according to the operational instructions of the data processing system and user (Col. 3, Line 20). Battaglia further teaches outputting status of the copying (i.e. operational state information of the data exchange and storage device) (Col. 3, Line 25) and relevant information of the flash memory module (Col. 6, Line 29) through the LCD and LED (i.e. information prompt module).

Art Unit: 2186

Regarding Claim 18, the claim recites "playing the multi-media data read from the external storage equipment or the internal memory module through the audio module and/or video module according to the operational instructions of the data processing system and the users." Battaglia teaches the data transfer device of Fig. 1 to reproduce music (i.e. play multi-media data read from the flash memory storage through an audio module) (Col. 2, Line 45).

Regarding Claim 19, the claim recites "the manual control module transmitting the operational instructions, such as, storing user data, prompting information, switching operational modes, etc., to the controller module." Battaglia teaches user interface keys (i.e. manual control module) for allowing a user to initiate copying of data from a flash memory module or to reformat a memory module (i.e. transmitting operational instructions such as switching operational modes) (Col. 3, Line 3).

Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2186

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 2-3 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Battaglia (US 6658202) in view of Su (US 6789164).

Regarding Claims 2 and 3, Claim 2 recites "wherein the internal memory module includes a hard disk, a removable hard disk, a semiconductor storage, and an optical medium storage driving device." Note that the claim recites for a hard disk, semiconductor storage, and an optical medium storage to all be present. Claim 3 further recites that "the semiconductor storage is selected from one of Flash Memory, DRAM, EEPROM, SRAM, FRAM, MRAM and Millipede, and adopts one or more semiconductor chips." Battaglia teaches the mass storage device (i.e. internal memory module) (Col. 3, Line 53) can include a hard drive that is fixed or removable (i.e. a hard disk or a removable hard disk), and can further include a high capacity flash memory module or battery backed SRAM (i.e. semiconductor storage selected from one of Flash Memory and SRAM).

Art Unit: 2186

However, Battaglia does not explicitly teach the mass storage device to further include an optical medium storage. Su teaches an apparatus for directly transferring data from a compact flash memory to an optic disk, without an intervening computer system (Col. 1, Line 29). Then combining Battaglia and Su would naturally incorporate the optic disk as part of a mass storage device. It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Battaglia's mass storage device with Su's optical disk writing. Su provides the reference in Col. 1, Line 16, where such storage is space-efficient.

7. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Battaglia (US 6658202) in view of Mansfield (US 5014192).

Regarding Claim 9, the claim recites "wherein the manual control module includes a dial switch and keys". Battaglia teaches the user interface to contain keys (Col. 3, Line 13), but does not explicitly teach a dial switch. Mansfield teaches a dial switch (Col. 12, Line 14) for locating a file in a mass storage device (Abstract). It would have been obvious to a person of ordinary skill in

Art Unit: 2186

the art at the time of the invention to modify Battaglia's user interface with a dial switch. Battaglia provides the reference, where the LCD display is meant to allow users to see images stored on the mass storage device. Then a dial switch can allow a user to see all the images of a mass storage device by incrementing through the images, in the same manner as Su teaches incrementing through the files using a dial switch.

8. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Battaglia (US 6658202) in view of Viswanadham (US 6208044).

Regarding Claim 14, the claim recites "an eject device arranged at the interface of the external storage equipment interface module, the eject device may eject the external storage equipment after being pressed." Battaglia teaches a data transfer device, into which a removable memory module can be inserted and removed. However, Battaglia does not explicitly teach an eject device and pressing an eject device. Viswanadham teaches an ejection system for a mass storage system, where the ejected medium is a PCMCIA card (Abstract). Viswanadham further teaches an eject button to be pressed for ejecting the card (Col. 3, Line 59). Fig. 1

Art Unit: 2186

shows the button to be at the interface of the input port (i.e. external storage equipment interface module). Combining this with Battaglia's second input port would provide for an input PCMCIA slot that can eject PCMCIA cards through an eject button. It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Battaglia's mass storage device with Viswanadham's eject device. Viswanadham provides the motivation in Col. 2, Line 20, where manual ejection through a button would obviate the need for a solenoid or motor involved in automatic ejection of PCMCIA cards.

9. With respect to the remark; first of all, (a) The non-statutory obviousness-type double patenting of claims 1, 3-4 and 7 of the current application over claims 1 and 4-6 of co-pending U.S. Serial No. 10/261,001 (as detailed in the previous office action) is hereby maintained since both claims 1 still teach a controller module, storage medium, and two interfaces. Although, again, application No. 10/261,001 teaches a first interface to a data processing system and not a second interface to an external storage equipment, the actual device connected to the second interface constitutes intended use. That is, in this

Art Unit: 2186

Application, the external storage equipment is not part of the data exchange and storage device. The interface is part of the device, and is anticipated by the second interface of Claim 1 of application No. 10/261,001.

Secondly, the further limitation of "wherein the controller module permits data exchange and data access from the internal memory module to the external storage equipment and from the external storage equipment to the internal memory module when the data processing system is not connected" being contended by Applicant's counsel is taught by Tullis and Battaglia; since Tullis clearly disclose that the digital camera can communicate with the host computer through the wireless communication link (e.g. see abstract, column 2, lines 45 et seq.); also see Battaglia's column 3, lines 46 et seq.; With regarding to the 103 rejection of Battaglia in view of U.S. Patent No. 5,014,192 (Mansfield); Battaglia in view of U.S. Patent No. 6,208,044 (Viswanadham); Examiner recognize that in considering a 35 USC 103 rejection, it is not strictly necessary that a reference or references explicitly suggest the claimed invention (this is tantamount to a 35 USC 102 reference if the modifications would have been obvious to those of ordinary skill in the art. It has been held that

Art Unit: 2186

the test of obviousness is not whether the features of a secondary reference may be bodily incorporated into the primary reference structure, nor whether the claimed invention is expressly suggested in any one or all of the references; rather, the test is what the combined teachings of the reference would have suggested to those of ordinary skill in the art. See In re Keller et al., 208 U.S.P.Q 871. In addition, Examiner further recognizes that references cannot be arbitrarily combined and that there must be some reason why one skilled in the art would be motivated to make the proposed combination of primary and secondary references. In re Nomiya, 184 USPQ 607 (CCPA 1975). However, there is no requirement that a motivation to make the modification be expressly articulated. The test for combining references is what the combination of disclosures taken as a whole would suggest to one of ordinary skill in the art. In re McLaughlin, 170 USPQ 209 (CCPA 1971). "Mansfield and Battaglia" or Viswanadham and Battaglia references are evaluated by what they suggest to one versed in the art, rather than by their specific disclosures. In re Bozek, 163 USPQ 545 (CCPA) 1969. In this case, the Mansfield and Viswanadham references were used to provide missing elements that are known to be

Art Unit: 2186

required in the Battaglia reference in order to arrive at Applicant's current invention (detailed above). The 35 USC § 103 rejection based on said combination is therefore deemed to be proper.

10. Applicant's arguments filed September 27, 2007 have been fully considered but they are not deemed to be persuasive.

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. 1.136(a).

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan V. Thai whose telephone number is (571)-272-4187. The examiner can normally be reached on from 6:30 A.M. to 4:00 P.M..

Art Unit: 2186

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mathew M. Kim can be reached on (571)-272-4182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TVT/December 07, 2007

/Tuan V. Thai/

Primary Examiner, Art Unit 2186